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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/024,869	12/19/2001	Rene Jean Zimmer	DN2001205	3717

7590 05/18/2004

The Goodyear Tire & Rubber Company
Patent & Trademark Department-D/823
1144 East Market Street
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EXAMINER	
MAKI, STEVEN D	

ART UNIT	PAPER NUMBER
1733	

DATE MAILED: 05/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/024,869	ZIMMER ET AL.	
	Examiner	Art Unit	
	Steven D. Maki	1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 February 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

tread

2) **Claims 1-13 and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohsawa (US 2001/0032691) and optionally Heinen '100 (GB 2363100) or Heinen '835 (US 6415835).**

Ohsawa, Heinen '100 and Heinen '835 are applied as in paragraph 4 of the last office action dated 11-19-03 (paragraph 4 of the last office action dated 11-19-03 is incorporated herein by reference).

Applicant argues that the consequence of the invention is a projection having an undercut extending from the projection apex to its base. The examiner disagrees. The claimed invention requires an acute angle of 5-60 degrees instead of an undercut. None of the claims require an undercut. As can be seen from the following illustrations:

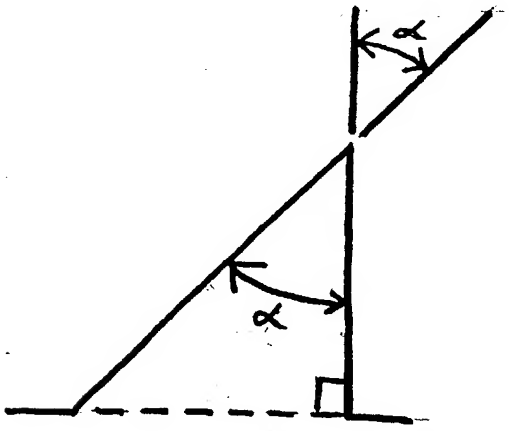

FIGURE A ($\alpha = 45°$)

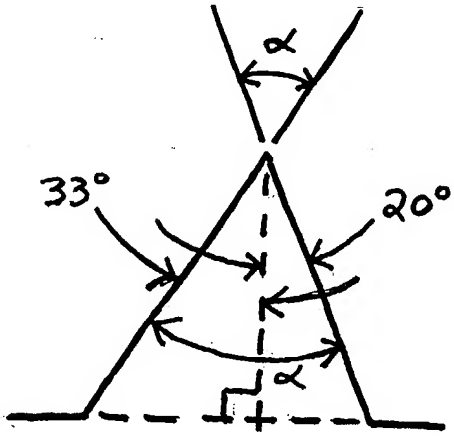

FIGURE B ($\alpha = 53°$)

the claimed requirement of an angle α ranging from 5 to 60 degrees can be satisfied by (1) a projection as shown in figure A defining an angle 45 degrees but not having an undercut or (2) a projection as shown in figure B defining an angle α of 53 degrees but not having an undercut.

Applicant argues that Ohsawa fails to teach or suggest a projection having an angle of 5-60 degrees (an inclination falling within the claimed invention specifications). Applicant is incorrect. An illustration of one of Ohasawa's triangle projections is provided below:

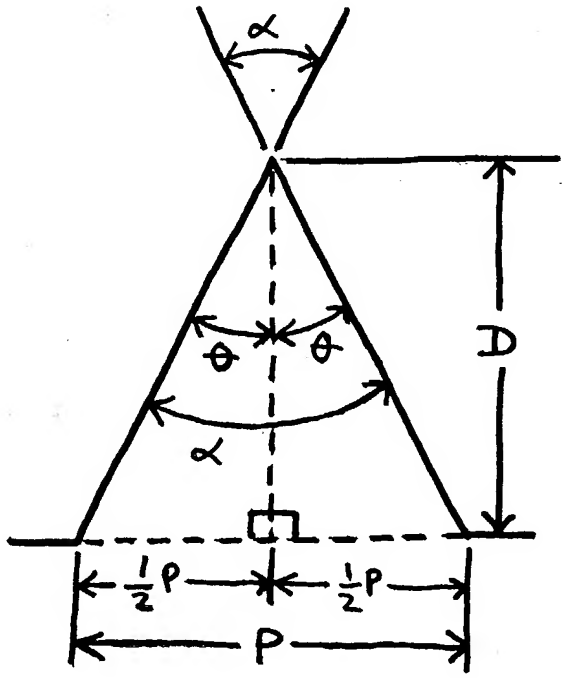

FIGURE C

In the tire of Example 1, the depth D is 0.05 mm (50 micrometers) and the pitch P is 0.05 mm (50 micrometers). See paragraph 258. Since depth P = D in Example 1,

Ohsawa's formula $P \leq 2D$ is satisfied. With reference to the above noted figure C, angle θ = 26.6 degrees (tan θ = 0.025 mm / 0.05 mm). Since "angle α" equals 2θ, the "angle α" is 53.2 degrees (falling within the claimed range 5-60 degrees).

Applicant argues that the enhanced water and dispersement achieved by the present invention is not achieved by Ohsawa. This argument is not persuasive because there is no evidence of record showing that "enhanced water and dispersement achieved by the present invention is not achieved by Ohsawa". Furthermore, improvement with regard to water repellence as described in the applicant's specification (e.g. at paragraph 16) is an expected result since Ohsawa teaches "... a number of minute vortexes can be generated along the groove walls to reduce the frictional resistance between the water and the groove walls thereby to improve the wet performances at an actual running time" (paragraph 14).

Applicant argues that severely sloping projections having a height that is within a 1 to 100 micrometer range is not taught by the reference. First: Ohsawa suggests a height falling within the claimed range of 1 to 100 micrometers since Ohsawa teaches using a depth (height) of 0.01 to 0.5 mm (10 to 500 micrometers).such as 0.05 mm (50 micrometers). Second: Claim 1 describes an angle of 5 to 60 degrees instead of "severely sloping". Ohsawa's teaching to use **$P \leq 2D$** strongly suggests using an angle within the claimed range of 5 to 60 degrees. For example: In the tire of Example 1 in which **P = D**, an angle α of 53.2 degrees is defined. Another example: In the tire g of Table 1 in which **P = 0.75 D**, an angle of 41.1 degrees is defined.

Applicant argues that the angle alpha between the long side and the short side of the asymmetrical projection in figure 26 is substantially 90 degrees. More properly, Ohsawa's teaching to use a pitch less than two times the depth so that the reduction of resistance to flow of water is high strongly suggests a relatively small acute angle. This relatively small acute angle in Example 1 is 53.2 degrees. This relatively small acute angle in tire g is 41.1 degrees. It is acknowledged that the projections in Example 1 and tire g are symmetrical. As noted in the last office action however, Ohsawa and the optional Heinen suggest that an asymmetrical cross section may be used as an alternative to a symmetrical cross section.

As to claims 2 and 8, applicant's argument that Ohsawa does not have an undercut is not persuasive since none of the claims require an undercut.

As to claims 3 and 7, applicant comments that the curved line curves backward as an undercut. Examiner comments that claims 3 and 7 fail to require an undercut.

As to claim 5, applicant argues that the angle range -15 to + 15 degrees may not be reasonably inferred from Ohsawa merely from a longitudinal orientation of the projections. This argument is not understood since parallel longitudinal projections must define with each other an angle of 0 degrees which falls within the claimed range of -15 to + 15 degrees, or is in other words at the midpoint of the range -15 to +15 degrees.

As to claim 6, applicant's argument that the projection spacing in the context of a projection having an undercut shorter surface to longer surface is not found in Ohsawa is not persuasive since claim 6 fails to require an undercut.

As to claim 15, applicant refers to the utilization of projections for the purpose of creating lettering but fails to explain why Ohsawa's elongated projection does not form the letter I.

sidewall / tread

3) **Claims 1-8, 10-16 and 18 rejected under 35 U.S.C. 103(a) as being unpatentable over Kemp (US 6253815) and optionally Ohsawa (US 2001/0032691).**

Kemp and Ohsawa are applied as in paragraph 5 of the last office action dated 11-19-03 (paragraph 5 of the last office action dated 11-19-03 is incorporated herein by reference).

Applicant argues that the invention teaches a low projection height (not found in Kemp) that gives a surface a fine texture while the projection of the invention is specifically recited to fall within a range of inclinations that will effectively eliminate fluid and dirt from the surface. Applicant specifically argues that Kemp teaches away from the claimed invention. Applicant's argument is not persuasive. First: Kemp's projections are not low height projections since they have an extremely low height of for example 0.25 mm. Second: Kemp teaches that these projections reflect a desired amount of light so that indicia is clearly visible. Kemps use of projections to reflect light to improve visibility of indicia corresponds directly to applicant's alternative benefit of using projections to improve optical appearance. See paragraph 19 of applicant's specification. Third: Ohsawa (optionally applied) motivates one of ordinary skill in the art to use a height within the claimed range of 10 to 100 micrometers as an alternative to the example height of 0.25 mm (250 micrometers) since Ohsawa teaches using a

height of 0.01 to 0.5 mm (10 to 500 micrometers) to reduce frictional resistance between water and a groove wall surface to thereby effectively eliminate water from the surface. Ohsawa's benefit is applicable to Kemp since both Ohsawa and Kemp teach using the extremely low height projections in grooves of a tire tread.

Applicant describes Kemp as having a projection having an angle of substantially 90 degrees between the projection sides. More properly, Kemp teaches forming the projections such that the projection has an acute angle between the projection sides. See figure 10. When the projection aspect ratio is 3:1 and the one side is at 90 degrees with respect to surface, the acute angle between the sides is 72 degrees (90 degrees - 18 degrees). This embodiment is specifically described at col. 5 lines 53-61. Kemp is not limited to an acute angle of 72 degrees. For example, the illustrated projection in figure 10 (which has an aspect ratio of about 2:1 and one side at 90 degrees with respect to the surface) defines an acute angle of about 60 degrees between the projection sides. Another example: When the aspect ratio is the preferred 1:1 (col. 5 line 15) and the one side is at 90 degrees to the surface as shown in figure 10, the acute angle is 45 degrees.

4) **Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kemp (US 6253815) and optionally Ohsawa (US 2001/0032691) as applied above and further in view of Attinello et al (US 5645660).**

Attinello et al is applied as in paragraph 6 of the last office action dated 11-19-03 (paragraph 6 of the last office action dated 11-19-03 is incorporated herein by reference).

Applicant's argument that Kemp, Ohsawa and Attinello do not teach forming an undercut is not persuasive since claim 9 fails to require an undercut.

Applicant comments that the claimed projection recites the creation of a projection having improved liquid and dirt evacuation and differentiation in height in order to achieve a visible effect. Applicant argues that no such combination of utilities or functions is achieved by the three cited references. This argument is not persuasive since (1) claim 9 fails to require such a combination of utilities and (2) no unexpected results over the applied prior art has been shown.

5) **Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kemp (US 6253815) and optionally Ohsawa (US 2001/0032691) as applied above and further in view of Baker (US 5603796).**

Baker et al is applied as in paragraph 7 of the last office action dated 11-19-03 (paragraph 7 of the last office action dated 11-19-03 is incorporated herein by reference).

Applicant's argument that the applied prior art individually fail to provide the combined utility of the invention is not persuasive since (1) claim 9 fails to require such a combination of utilities and (2) no unexpected results over the applied prior art has been shown.

Remarks

6) Applicant's arguments filed 2-9-04 have been fully considered but they are not persuasive.

7) No claim is allowed.

8) **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 7:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Steven D. Maki
May 14, 2004

Steven D. Maki 5-14-04
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PRIMARY EXAMINER
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